Amend the follow definitions in 310 CMR 7.00 Definitions:

EMERGENCY OR STAND-BY ENGINE for the purposes of 310 CMR 7.02(8)(i) and 7.03(10), means any stationary internal combustion engine which operates as an emergency or standby mechanical or electrical power source. ~~A load shaving unit, peaking power production unit or a standby engine in an energy assistance program is not an emergency or standby engine under this definition.~~

STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINE means any reciprocating internal combustion engine. It does not include an engine that is regulated by EPA as a non-road engine defined under 40 CFR 1068.30~~pursuant to 42 U.S.C. 7543(e) and 42 U.S.C. 7547(e)~~ or is self-propelled.

Amend 310 CMR 7.02(2)(b)

8. Emergency Engines or Stand-by Engines. An ~~individual~~ emergency or stand-by engine that operates in compliance with the provisions of 310 CMR 7.02(8)(i) if installed prior to June 1, 1990 or is in compliance with 310 CMR 7.03 for units installed on or after June 1, 1990. An emergency or stand-by engine~~s~~ that ~~have received plan approval must~~ is approved under 310 CMR 7.02(5) shall comply with the terms and conditions of the plan approval.

29. Turbines and Reciprocating Engines.
    a. Prior to March 23, 2006, an ~~individual~~ internal combustion engine including a combustion turbine or reciprocating engine having an energy input capacity less than 3,000,000 Btu per hour or an internal combustion engine that is operated as a non-road engine as defined under 40 CFR 1068.30~~regulated by EPA as a nonroad engine pursuant to 40 CFR 89, 90, 91, and 92~~.
    b. On and after March 23, 2006, an ~~individual~~ internal combustion engine including a combustion turbine or reciprocating engine installed and operated in compliance with 310 CMR 7.26(40) through (44), or an internal combustion engine that is operated as a non-road engine as defined under 40 CFR 1068.30~~regulated by EPA as a non-road engine pursuant to 40 CFR 89, 90, 91, and 92~~.

Amend 310 CMR 7.02(5)(a)3.

3. Internal Combustion Engines and Turbines.
    a. Prior to March 23, 2006 an~~y~~ ~~individual~~ internal combustion engine, such as a stationary combustion turbine or a stationary reciprocating engine, having a maximum energy input capacity equal to or greater than 3,000,000 Btu per hour, and the construction, substantial reconstruction, alteration or subsequent operation results in an increase in potential emissions of a single air contaminant of equal to or greater than one ton per year.
    b. On and after March 23, 2006 a non-emergency turbine with a rated output of less than one megawatt (MW) burning fuel oil, or greater than ten MW burning any fuel~~Any individual internal combustion engine, such as stationary combustion turbine or stationary reciprocating engine, installed on or after March 23, 2006 shall comply with the requirements of 310 CMR 7.26(40) through (44), *Engines and Combustion Turbines,*~~

except as provided by 310 CMR 7.26(42)(a)1., 310 CMR 7.26(43)(a)2. and 310 CMR 7.26(43)(a)3.

b.c. An engine subject to 310 CMR 7.26(43) proposed pursuant to 310 CMR 7.26(43)(a)1.

c. An application is not required pursuant to 310 CMR 7.02(5)(a)3. if the internal combustion engine is regulated by EPA as a non-road engine pursuant to 40 CFR 89, 90, 91, and 92.

d. A combined heat and power project (CHP) proposed pursuant to 310 CMR 7.26(45).

Amend 310CMR 7.02(8)(a)

(a) Emission Limitations in Plan Approvals. The Department's written approval of an LPA or CPA shall include the most stringent emission limitation of the following, as applicable:

……..

8. Plan Approvals under 310 CMR 7.26(45) shall use the credits calculated by 7.26(45)(b)4 to subtract from the actual emissions in determining compliance with the emission limits established under 310 CMR 7.26(43)(b).

Amend 310 CMR 7.02(8)(i).

(i) U Emergency or Standby Engine(s).

1. Applicability. On and after March 23, 2006, the construction, substantial reconstruction, or alteration of any emergency or standby engine greater than or equal to 37kW shall be governed bycomply with the requirements of 310 CMR 7.26(40) through (4442), *Engines and Combustion Turbines*., except that an emergency or standby engine installed prior to March 23, 2006 shall comply with a. or b. below as applicable:

   a. Persons owning, operating or controlling an emergency or standby engine(s) constructed, substantially reconstructed, or altered prior to June 1, 1990, having an energy input capacity equal or greater than 3,000,000 Btu per hour individually shall operate said engine(s) in compliance with 310 CMR 7.02(8)(i)2. through (i)5.; or Notwithstanding the previous sentence, an operator or owner of an emergency or standby engine(s) constructed, substantially reconstructed or altered prior to June 1, 1990 and having an energy input capacity equal to or greater than 3,000,000 Btu per hour individually may apply for alternative operating and reporting requirements under 310 CMR7.02(5)(a)3.

   b. Persons owning, operating or controlling an emergency or standby engine(s) having an energy input capacity less than 3,000,000 Btu per hour per engine, who elect to establish limits on the hours of operations of said engine(s) shall may comply with 310 CMR 7.02(8)(i)2. through (i)5., or 310 CMR 7.02(11).

   c. An emergency or standby engine's potential to emit under 310 CMR 7.02(8)(i) shall be the product of the maximum hourly emission rate times 300 hours.

2. Limits of Operation. Each engine may shall only be operated no more than a total of 300 hours per any rolling 12 month period, and only during:

   a. the normal maintenance and testing procedure as recommended by the manufacturer, or readiness testing,; and

   b. periods of electric power outage due to failure of the grid, in whole or in part, onsite disaster, local equipment failure, flood, fire or natural disaster,; and

c. when the imminent threat of a power outage is likely due to failure of the electrical supply or when capacity deficiencies result in a deviation of voltage from the electrical supplier to the premises of 3% above or 5% below standard voltage~~, or~~and d. periods during which the regional transmission organization directs the implementation of voltage reductions, voluntary load curtailments by customers, or automatic or manual load shedding within Massachusetts in response to unusually low frequency, equipment overload, capacity or energy deficiency, unacceptable voltage levels, or other emergency conditions.

3. Record Keeping. The owner ~~or~~/operator shall maintain on site or, for remote locations, at the closest facility where records can be maintained, the following records for each engine:
   a. Information on equipment type, make and model, and maximum power input/output; and
   b. A ~~monthly~~ log~~(s) of hours~~ of operations, including date, time and duration of operation and reason for each start, ~~gallons of fuel used,~~ fuel type and ~~heating value~~supplier~~, and a monthly calculation of the total hours operated and gallons of fuel used in the previous 12 months~~; and
   c. Purchase orders, invoices, and other documents to support information in the monthly log.
   ~~c.~~d. A log of the conditions under which the engine operated pursuant to 310 CMR 7.02(8)(i)2.a.-d.
4. Availability of Records. Monthly log(s) and records established under 310 CMR 7.02(8)(i)3. shall be made available to the Department or its designee upon request. The owner ~~or~~ /operator shall certify that the log is accurate and true in accordance with 310 CMR 7.01(2)(c).
5. Fuel Requirements. On and after July 1, 2007, no person shall accept for delivery for burning in any engine subject to 310 CMR 7.02(8)(i), diesel or any other fuel that does not meet the ~~applicable U.S. Environmental Protection Agency~~ sulfur content limit~~s~~ for fuel in 310 CMR 7.05.~~pursuant to 40 CFR 80.29, 40 CFR 80.500, and 40 CFR 80.520(a) and (b) as in effect January 18, 2001.~~

Amend 310 CMR 7.03(10)

(10) Emergency or Standby Engine.
(a) On or after June 1, 1990, but prior to March 23, 2006, construction, substantial reconstruction or alteration of any emergency or standby engine shall comply with 310 CMR 7.03(10)(a) through (c). An emergency or standby engine's potential to emit shall be the product of the maximum hourly emission rate times 300 hours. All such emergency or standby engines shall:

1. Have an energy input capacity of equal to or greater than 3,000,000 Btu per hour and less than or equal to 10,000,000 Btu per hour; and
2. Be equipped with an exhaust gas silencer so that sound emissions from the generator will not cause or contribute to a condition of air pollution; and
3. Utilize an exhaust stack that discharges so as to not cause or contribute to a condition of air pollution~~,~~; and
4. ~~Not operate more than a total of 300 hours per rolling 12 month period, and~~Operate only during:

a. The normal maintenance and testing procedure as recommended by the manufacturer, or readiness testing; ~~and~~
b. Periods of electric power outage due to failure of the grid, in whole or in part, onsite disaster, local equipment failure, flood, fire or natural disaster; ~~and~~
c. ~~w~~When the imminent threat of a power outage is likely due to failure of the electrical supply or when capacity deficiencies result in a deviation of voltage from the electrical supplier to the premises of 3% above or 5% below standard voltage;~~, or~~and
d. Periods during which the regional transmission organization directs the implementation of voltage reductions, voluntary load curtailments by customers, or automatic or manual load shedding within Massachusetts in response to unusually low frequency, equipment overload, capacity or energy deficiency, unacceptable voltage levels, or other emergency conditions.

(b) On and after July 1, 2007, no person shall accept for delivery for burning in any engine subject to 310 CMR 7.03(10), diesel or any other fuel that does not meet the ~~applicable U.S. Environmental Protection Agency~~ sulfur ~~limits~~ content limit for fuel in 310 CMR 7.05~~pursuant to 40 CFR 80.29, 40 CFR 80.500, and 40 CFR 80.520(a) and (b) as in effect January 18, 2001~~.
(c) Reporting and record keeping requirements for 310 CMR 7.03(10), as required by 310CMR 7.03(5) and (6), shall be in accordance with 310 CMR 7.02(8)(i)3. through 4.

Amend 310 CMR 7.05(1)(a)3
3. Stationary Engines and Turbines. On and after July 1, 2007, no person owning, leasing or controlling a stationary engine or turbine subject to the requirements of 310 CMR 7.02(8)(i), 310 CMR 7.03(10), or 310 CMR7.26(40) through (44) shall accept for delivery for burning any diesel or other fuel~~ unless said fuel complies with~~that does not meet the ~~applicable U.S. Environmental Protection Agency~~ sulfur ~~limits~~ content limit for fuel in 310 CMR 7.05~~pursuant to40 CFR 80.29, 40 CFR 80.500, and 40 CFR 80.520(a) and (b) as in effect January 18, 2001~~.

Amend 310 CMR 7.26(40)-(45)

~~(40) Engines and Combustion Turbines - Applicability.~~
~~(a) 310 CMR 7.26(40) through (44) in its entirety shall apply to any person who owns or operates engines and combustion turbines installed on and after March 23, 2006 and are not subject to Prevention of Significant Deterioration (40 CFR 52.21) or Non-attainment Review at 310 CMR 7.00: *Appendix A*,.~~

~~(b) Owners and operators of engines regulated under 40 CFR 89, 90, 91, and 92 are exempt from the requirements of 310 CMR 7.26(40) through (44) in its entirety.~~

(40) Engines and Combustion Turbines.
(a) Engines and Turbines. For equipment installed on and after March 2006, the owner/operator of:
1. An emergency engine or turbine shall comply with the requirements of 310 CMR 7.26(42).
2. Any other engine or turbine shall comply with the requirements of 310 CMR 7.26(43) or 7.02(5).
3. An engine or turbine in a CHP operation may utilize 310 CMR 7.26(45).

(b) Exceptions. 310 CMR 7.26(40) through (45) shall not apply to:

1. An engine that is operated as a non-road engine as defined under 40 CFR 1068.30.
2. Any construction or major modification that would be subject to Prevention of Significant Deterioration (PSD) review, or Emission offsets and Non-attainment Review at 310 CMR 7.00: *Appendix A*, with respect to the installation of the engine or turbine.

(41) Definitions. Terms used in 310 CMR 7.26(40) through (~~44~~45) are defined in 310 CMR 7.00 and 310 CMR 7.26(41). When a term is defined in both 310 CMR 7.00 and 310 CMR 7.26(41), the definition in 310 CMR 7.26(41) shall govern.

Applicable Model Year means the model year that corresponds to the calendar year in which the engine is installed.

Combined Heat and Power ~~and~~ (CHP) means a system consisting of an engine or turbine in combination with a heat recovery system such as a boiler that sequentially produces both electric power and thermal energy for use.

Design System Efficiency means the sum of the full load design thermal output and electric output divided by the heat input, all in consistent units of measurement.

Emergency means an electric power outage due to failure of the grid, in whole or in part, on-site disaster, local equipment failure, flood, fire, or natural disaster. Emergency shall also mean when the imminent threat of a power outage is likely due to failure of the electrical supply or when capacity deficiencies result in a deviation of voltage from the electrical supplier to the premises of 3% above or 5% below standard voltage.~~, or periods during which the regional transmission organization directs the implementation of voltage reductions, voluntary load curtailments by customers, or automatic or manual load shedding within Massachusetts in response to unusually low frequency, equipment overload, capacity or energy deficiency, unacceptable voltage levels, or other such emergency conditions.~~

Emergency Demand Response means periods during which the regional transmission organization directs the implementation of voltage reductions, voluntary load curtailments by customers, or automatic or manual load shedding within Massachusetts in response to unusually low frequency, equipment overload, capacity or energy deficiency, unacceptable voltage levels, or other such emergency conditions.

Engine~~s~~ means spark ignition (SI) ~~and~~ or compression ignition (CI) stationary reciprocating internal combustion engine~~s~~.

Install or Installation as used in 310 CMR 7.26(42) and (43) means to set an emission unit in position for use. Relocating a previously approved engine or turbine within the same facility or to a contiguous property owned and operated by the same owner is not an installation.

Model Year means the calendar year in which the engine was originally produced, or the annual new model production period of the engine manufacturer if it is different than the calendar year.

Model Year shall include January 1 of the calendar year for which the model year is named. Model Year shall not begin before January 2 of the previous calendar year, and it shall end by December 31 of the named calendar year. For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, Model Year means the calendar year or new model production period in which the engine was originally produced.

Power-to-heat Ratio means the design electrical output divided by the design-recovered thermal output in consistent units of measurement.

Rated Power Output means the maximum ~~electrical or equivalent~~ mechanical power output stated on the nameplate affixed to the engine or turbine by the manufacturer.

Supplier means a person that manufactures, assembles, or otherwise supplies engines or turbines.

Turbine means a stationary combustion turbine.

(42) Emergency Engines and Emergency Turbines.

(a) Applicability. 310 CMR 7.26(42) shall apply to any person who owns or operates an ~~emergency or standby~~ engine with a rated power output equal to or greater than 37 kW, ~~and~~or a ~~emergency~~ turbine~~s~~ with a rated power output less than one MW, that is~~are constructed, substantially reconstructed or altered~~ installed after March 23, 2006. An engine's or turbine's potential to emit under 310 CMR 7.26(42) shall be product of the maximum hourly emission rate times 300 hours.

~~Owners and operators of peaking power units, load shaving units or units in an energy assistance program are subject to the requirements of 310 CMR 7.26(43).~~

~~1. Owners and operators of emergency turbines with a rated power output equal to or greater than one MW shall comply with the provisions of 310 CMR 7.02(5).~~

~~2. Owners and operators of emergency engines and turbines that are subject to 310 CMR 7.02(8)(i) or 310 CMR 7.03(10) shall continue to be subject to such requirements.~~

~~3. Owners and operators of emergency engines and turbines subject to 310 CMR 7.26(42) are not subject to the requirements of 310 CMR 7.02(5).~~

~~4. Owners and operators of emergency or standby engines and turbines used as mechanical power sources for water pumping activities such as, but not limited to, firefighting, flood control, waste water flow, are subject 310 CMR 7.26(42) in its entirety.~~

~~5. Owners and operators of emergency engines or turbines approved prior to September 23, 2005 under the requirements of 310 CMR 7.02(5) may operate during an emergency as defined in 310 CMR 7.26(41).~~

(b) Emission Limitations. ~~Owners~~ The owner/~~and~~ operator~~s~~ of an ~~emergency~~ engine~~s~~ or ~~and~~ turbine~~s~~ subject to 310 CMR 7.26(42) ~~must~~ shall comply with the emission limitations as follows: ~~set forth in 310 CMR 7.26(42).~~

1. Before [effective date of regulation], ~~Engines with a rated power output equal to or greater than 37 kWmust comply with~~ the applicable model year emission limitations set by the ~~US~~ EPA for non-road compression ignition engines (40 CFR 89 as in effect October 23, 1998) at the time of the engine installation. ~~The owner~~

~~or operator of an engine subject to the requirements of 310 CMR 7.26(42)(b)1. shall obtain from the supplier a statement that a certificate of conformity has been obtained from the Administrator pursuant to 40 CFR 89.105 as in effect October 23, 1998. Any engine certified under the US EPA non-road standards is automatically certified to operate as an emergency engine pursuant to 310 CMR 7.26(42). For units that burn natural gas exclusively, a letter or other documentation from the supplier stating that the engine meets the applicable non-road emission limitation will satisfy the certificate of conformity requirement.~~

2. On and after [effective date of regulation], ~~an engine with a rated power output equal to or greater than 37 kW~~ the applicable model year emission limitations set by EPA in Standards of Performance for New Stationary Sources for emergency compression ignition reciprocating engines under 40 CFR 60 Subpart IIII.

3. The owner/operator of an engine subject to the requirements of 310 CMR 7.26(42)(b)1. and 2. shall obtain from the supplier a statement that a certificate of conformity has been obtained from the Administrator.

a. For an engine installed on or before [effective date] pursuant to 40 CFR 89.105 as in effect October 23, 1998, any engine certified under EPA nonroad standards is automatically certified to operate as an emergency engine pursuant to 310 CMR 7.26(42).

b. For a spark ignition engine, a letter or other documentation from the supplier stating that the engine meets the applicable emission limitation shall satisfy the certificate of conformity requirement in 310 CMR 7.26(42)(b)3.

~~2~~4. ~~All~~ A ~~emergency~~ turbine~~s~~ with a rated power output less than one MW shall comply with the emission limitations contained in 310 CMR 7.26(42): *Table 1*.

Table 1

Emission Limitations – Emergency Turbines

Rated Power Output	**Oxides of Nitrogen**
< 1 MW	0.60 pounds/MW - hr

(c) Fuel Requirements. ~~On and after July 1, 2007,~~ No person shall accept delivery for burning in any engine or turbine subject to 310 CMR 7.26(42) diesel or any other distillate fuel that does not meet the ~~applicable U.S. Environmental Protection Agency~~ sulfur content limits for fuel in 310 CMR 7.05. ~~pursuant to 40 CFR 80.29, 40 CFR 80.500, and 40 CFR 80.520(a) and (b) as in effect January 18, 2001~~

(d) Operational Requirements. Any person who owns or operates an ~~emergency or standby~~ engine or ~~emergency~~ turbine subject to 310 CMR 7.26(42) shall comply with the following requirements:

1. ~~Hours of~~ Operation and Maintenance.

~~The~~An engine ~~and~~or turbine ~~shall not be operated more than 300 hours during any rolling 12-month period.~~ shall ~~This operating restriction includes~~operate only during normal

maintenance and testing procedures as recommended by the manufacturer, readiness testing, during an emergency, or for emergency demand response. A non-turn-back hour counter shall be installed, operated and maintained in good working order on each unit.

~~2. Operation and Maintenance. The engine(s) or turbine(s) shall be operated and maintained in accordance with the manufacturer's recommended operating and maintenance procedures.~~

~~3~~2. Sound. Engines, turbines and associated equipment shall be constructed, located, operated and maintained in a manner to comply with the requirements of 310 CMR 7.10: *Noise*.

~~4~~3. Stack Height and Emission Dispersion.

a. All engines or turbines shall utilize an exhaust stack that discharges so as to not cause a condition of air pollution (310 CMR 7.01(1)).

i. Exhaust stacks shall be configured to discharge the combustion gases vertically and shall not be equipped with any part or device that restricts the vertical exhaust flow of the emitted combustion gases~~, including but not limited to rain protection devices "shanty caps" and "egg beaters"~~.

ii. Any emission impacts of exhaust stacks upon sensitive receptors including, but not limited to, people, windows and doors that open, and nearby building fresh air intakes, shall be minimized by employing good air pollution control engineering practices. Such practices include without limitation:

~~i~~1. Avoiding locations that may be subject to downwash of the exhaust; and

~~ii~~2. ~~I~~installing a stack~~(s)~~ of sufficient height in locations that will prevent and minimize flue gas impacts upon sensitive receptors.

3. Ensuring that the exhaust stack is at least ten feet above the building rooftop and at least 30 feet from any window that can open, door, and building fresh air intake.

b. An Engine~~s~~ or turbine~~s~~ with a rated power output equal to or greater than 300 ~~kw~~kW~~, but less than 1 MW,~~ shall have an exhaust stack with a minimum stack height of ten feet above the facility rooftop or the ~~emergency~~ engine or turbine enclosure, whichever is lower.

c. An Engine~~s~~ with a rated power output equal to or greater than one MW shall be equipped with an exhaust stack with a minimum stack height of 1.5 times the height of the building on which the stack is located. If the stack is lower than 1.5 times the building height or lower than the height of a structure that is within 5L of the stack (5L being five times the lesser of the height or maximum projected width of the structure), the owner/operator shall submit documentation that the operation of the engine or turbine will not cause an exceedance of any National Ambient Air Quality Standard.~~an EPA Guideline air quality model shall be run to document that the operation of the applicable emergency engine or turbine will not cause an exceedance of any Nnational Aambient Air Quality Standard.~~

5. Visible Emissions. ~~Emergency e~~Engines and turbines shall comply with all the requirements of 310 CMR 7.06(1)(a) and (b).

(e) Emission Certification, Monitoring and Testing.

1. Certification. No person shall cause, suffer, allow, or permit the installation and subsequent operation of an engine or turbine unless said person has certified compliance with the requirements of 310 CMR 7.26(42) in its entirety in accordance with the provisions of 310 CMR 70.00: *Environmental Results Program Certification*. Certification shall include a statement from the supplier that the installed engine or turbine is capable of complying with the emission limitations for the first three years of operation. A one-time certification shall be made to the Department within 60 days of commencement of operation. An annual certification is not required.

2. Monitoring. The Department may require emission or other monitoring to assure compliance with the requirements of 310 CMR 7.26(42).

3. Testing. Any testing when required shall comply with the following:

a. Tests to certify compliance with emission limitations must shall be performed in accordance with EPA reference Methods, California Air Resources Board Methods approved by EPA, or equivalent methods as approved by the Department and EPA.

b. Particulate matter from liquid fuel reciprocating engines using liquid fuel shall be determined using Method 8178 D2 of the International Organization for Standardization.

c. Testing shall be conducted at full the design load of the emergency engine or turbine.RESERVED

d. The Department may require emission or other testing to assure compliance with the emission limitations or fuel requirements.

(f) Recordkeeping and Reporting. The owner or /operator shall maintain records described in 310 CMR 7.26(42)(f)1. through 4. Such records shall be maintained on site or for remote locations, at the closest facility where records can be maintained and shall be made available to the Department or its designee upon request. The owner or /operator shall certify that records are accurate and true in accordance with 310 CMR 7.01(2)(a) through (c).

1. Information on equipment type, make and model, and rated power output; and

2. A monthly log of hours of operations, including date, time and duration of operation and reason for each start per 310 CMR 7.26(42)(d)1., fuel type and supplier, heating value and sulfur content for fuel oil. A monthly calculation of the total hours operated in the previous 12 months; and

3. Purchase orders, invoices, and other documents to substantiate information in the monthly log; and

4. Copies of all certificates and documents from the manufacturer related to certificates.

(43) Engines and Turbines.

(a) Applicability. 310 CMR 7.26(43) in its entirety shall apply to any person who owns or operates an engines with a rated power output equal to or greater than 50kW and or to a turbines with a rated power output less than or equal to ten MW that are constructed, substantially reconstructed, or alteredthat is installed on or after March 23, 2006, except:.

1. Engines and turbines subject to 310 CMR 7.26(42) are not subject to the requirements of 310 CMR 7.26(43).

21. The owner or /operator of any engine or turbine subject to 310 CMR 7.26(43) to be operated as a peaking power production unit, a load shaving unit, a unit in an energy

~~assistance program, a unit that produces mechanical power to run pumps, a unit used to compress natural gas at a pipeline compressor station, a unit burning landfill, digester, or biogas, or other biofuels,~~ may comply with the requirements of 310 CMR 7.02(5)(c) for such unit in *lieu* of complying with the requirements of 310 CMR 7.26(43). ~~Application must be made and written approval granted by the Department prior to construction, substantial reconstruction, or alteration of such engines or turbines.~~

~~3~~2. The owner/operator of a turbine~~Turbines~~ with a rated output of less than one MW burning fuel oil, or greater than ten MW burning any fuel, shall comply with the requirements of 310 CMR 7.02(5)(c) for such unit. ~~in *lieu* of complying with the requirements of 310 CMR 7.26(43). Application must be made and written approval granted by the Department prior to construction, substantial reconstruction, or alteration of such turbines.~~

~~4~~3. On and after January 17, 2009, any owner ~~or~~/operator who constructs, substantially reconstructs or alters an engine or turbine that is part of a combined heat and power system, may satisfy 310 CMR 7.26(43)(b) by complying with the requirements of 310 CMR 7.26(45).

(b) Emission Limitations. An owner/operator~~Owners and operators~~ of an engine~~s~~ or turbine~~s~~ subject to 310 CMR 7.26(43) shall comply with the emission limitations established in 310 CMR 7.26(43): ~~*Table 2, 3* and *4.*~~*Tables 1, 2 and 3.*

~~1. A supplier of an engine or turbine may seek to certify that an engine or turbine meet the emission limitations established in 310 CMR 7.26(43): *Table 2, 3* and *4.* All such certifications shall specify the make and model number of the engine or turbine. Certification means that the engine or turbine is capable of meeting the emission limitations for the lesser of 15,000 hours of operation or the first three years of operation. Supplier certification shall be on forms provided by the Department.~~

~~2. On or before December 31, 2010, the Department will complete a review of the state of, and expected changes in, technology and emission rates. The purpose of this review will be to determine whether the 310 CMR 7.26(43): *Table 2* emission limitations for engines to be installed on and after January 1, 2012, should be amended.~~

~~3. Beginning in 2017 and every five years thereafter, the Department shall review the state of technology and emission rates and determine whether the emission limits defined in 310 CMR 7.26(43): *Table 2, 3* or *4.* should be amended.~~

~~4. The Department may at other times review the state of technology and emission rates to determine whether the emission limits defined in 310 CMR 7.26(43): *Table 3* or *4* should be amended.~~

Table ~~2~~1
Emission Limitations – Engines

Installation Date	Oxides of Nitrogen	Particulate Matter (Liquid Fuel Only)	Carbon Monoxide
On and after 3/23/06	0.6 lbs/megawatt-hour (MWh)	≤ 1MW 0.7lbs/MWh > 1 MW 0.09 lbs/MWh	10 lbs/MWh
On and after 1/1/08	0.3 lbs/MWh	0.07 lbs/MWh	2 lbs/MWh
On and after 1/1/12	0.15 lbs/MWh	0.03 lbs/MWh	1 lb/MWh

Table ~~3~~2
Emission Limitations – Turbines

Rated Power Output	Oxides of Nitrogen	Ammonia	Carbon Monoxide
Less than 1 MW	0.47 lbs/MW-hr Natural Gas	N/A	0.47 lbs/MW-hr Natural Gas
1 to 10 MW	0.14 lbs/MW-hr Natural Gas 0.34 lbs/MW-hr Oil	2.0 ppm 15% O2 Dry Basis	0.09 lbs/MW-hr Natural Gas 0.18 lbs/MW-hr Oil

Table ~~4~~3
Emission Limitations – Engines and Turbines

Installation Date	Carbon Dioxide
On and after 3/23/06	1900 lbs/MWh
On and after 1/1/08	1900 lbs/MWh
On and after 1/1/12	1650 lbs/MWh

(c) Fuel Requirements. On or after July 1, 2007, no person shall accept delivery for burning in any engine or turbine subject to 310 CMR 7.26(43) diesel or any other distillate fuel that does not meet the ~~applicable U.S. Environmental Protection Agency~~ sulfur content limit~~s~~ for fuel pursuant to 310 CMR 7.05.~~to 40 CFR 80.29, 40 CFR 80.500, and 40 CFR 80.520(a) and (b) as in effect January 18, 2001.~~

(d) Operational Requirements. Any person who owns or operates an engine or turbine subject to 310 CMR 7.26(43) shall comply with the following operational requirements:

1. Operation and Maintenance. The engine~~(s)~~ ~~and~~or turbine~~(s)~~ shall be operated and maintained in accordance with the manufacturers recommended operating and maintenance procedures.
2. Sound. Engines, turbines and associated equipment shall be constructed, located, operated and maintained in a manner to comply with the requirements of 310 CMR 7.10: *Noise*.
3. Stack Height and Emission Dispersion.
    a. ~~All~~ An engine~~s~~ or turbine~~s~~ shall utilize an exhaust stack that discharges so as to not cause a condition of air pollution (310 CMR 7.01(1)). The exhaust stack~~s~~ shall be configured to discharge the combustion gases vertically and shall not be equipped with any part or device that restricts the vertical exhaust flow of the

emitted combustion gases~~, including but not limited to, rain protection devices such as "shanty caps" and "egg beaters"~~. Any emission impacts of exhaust stacks upon sensitive receptors such as people, windows and doors that open, and building fresh air intakes shall be minimized by employing good air pollution control engineering practices. Such practices include without limitation:

i. Avoiding locations that may be subject to downwash of the exhaust; ~~and~~

ii. ~~installing~~ Installing a stack~~(s)~~ of sufficient height in a location~~s~~ that will prevent and minimize flue gas impacts upon sensitive receptors.

iii. Ensuring that the exhaust stack is at least ten feet above the building rooftop and at least 30 feet from any window that can open, door, and building fresh air intake.

b. Engines and turbines burning liquid fuel and with a rated power output of less than 300 ~~kw~~ kW shall be equipped with an exhaust stack with a minimum stack height of five feet above the rooftop or the engine or turbine enclosure, whichever is ~~lower.~~higher.

c. Engines and turbines with a rated power output equal to or greater than 300~~kw~~kW~~, but less than one MW~~ shall be equipped with an exhaust stack with a minimum stack height of ten feet above the rooftop or the engine or turbine enclosure, whichever is ~~lower~~ higher.

d. Engines and turbines with a rated power output equal to or greater than one MW shall be equipped with an exhaust stack with a minimum stack height of 1.5 times the height of the building on which the stack is located. If the stack is lower than 1.5 times the building height or lower than the height of a structure that is within 5L of the stack (5L being five times the lesser of the height or maximum projected width of the structure), the owner/operator shall submit documentation that the operation of the engine or turbine will not cause an exceedance of any National Ambient Air Quality Standard.~~an EPA Guideline air quality model shall be run to document that the operation of the applicable engine or turbine will not cause an exceedance of any National Ambient Air Quality Standard.~~

4. Visible Emissions. Engines and turbines ~~must~~ shall comply with all the requirements of 310 CMR 7.06(1)(a) and (b).

(e) Emission Certification, Monitoring and Testing.

1. Certification. No person shall cause, suffer, allow, or permit the installation and subsequent operation of an engine or turbine unless said person has certified compliance with the requirements of 310 CMR 7.26(43) in its entirety in accordance with the provisions of 310 CMR 70.00: *Environment Results Program Certification*. ~~(initial and annual certification).~~ Certification by such person shall include a statement from the supplier that the installed engine or turbine is capable of complying with the emission limitations for the lesser of 15,000 hours of operation or the first three years of operation. A one-time certification shall be submitted to the Department 30 days prior to commencement of operation. An annual certification is not required.

2. Monitoring. The Department may require emission or other monitoring to assure compliance with the requirements of 310 CMR 7.26(43).

3. Testing. Any testing when required shall comply with the following:

a. Tests to certify compliance with emission limitations must be performed in accordance with EPA reference Methods, California Air Resources Board Methods as approved by EPA, or equivalent methods as approved by the Department and EPA.
b. Particulate matter, from liquid fuel reciprocating engines, shall be determined using Method 8178 D2 of the International Organization for Standardization (ISO).
c. ~~Testing shall be conducted at full design load of the engine or turbine.~~ RESERVED
d. The Department may require emission or other testing to assure compliance with the emission limitations or fuel requirements.

(f) Record Keeping and Reporting. The owner ~~or~~ /operator shall maintain records described in 310 CMR 7.26(43)(f)1. through 3~~4~~. Such records shall be made available to the Department or its designee upon request. The owner ~~or~~ /operator shall certify that records are accurate and true in accordance with 310 CMR 7.01(2)(a) through (c).

1. Information on equipment type, make and model, and maximum rated power output; ~~and~~
2. ~~A monthly log of hours of operation, gallons of fuel used,~~ Fuel type and supplier, ~~heating value, and sulfur content. A monthly calculation of the total hours operated and gallons of fuel used in the previous 12 months shall be kept on site~~; and
~~3. Purchase orders, invoices, and other documents to support information in the monthly log.~~
3. Copies of certificates and documents from the manufacturer related to certificates.

(44) Change in Operational Status. An owner ~~or~~ /operator of an engine or turbine subject to the requirements of 310 CMR 7.26(42): *Emergency Engines and Turbines* may elect to ~~remove the hours of operation restriction to~~ operate as~~in~~ a non-emergency engine or turbine by complying with either of the two following methods.

(a) Submit an application ~~for approval~~ and receive approval under the requirements of 310 CMR 7.02(5); or
(b) Certify to the Department that the engine or turbine meets all applicable requirements of 310 CMR 7.26(43).

Amend 310 CMR 7.26(45)

(45) Combined Heat and Power (CHP). The purpose of 310 CMR 7.26(45) is to encourage the installation of CHP systems. A methodology is set forth whereby emission credits are utilized in determining compliance of a CHP installation with the emission limitations contained in 310 CMR 7.26(43)(b).

(a) Eligibility. CHP installations shall meet the following requirements to be eligible for emission credits related to thermal output:

1. The power-to-heat ratio must be between 4.0 and 0.15.
2. The design system efficiency must be at least 55%.
3. The CHP project must comply with the requirements of 310 CMR 7.02(5)(c).

4. The engine has a rated power output equal to or greater than 50 kW or the turbine has a rated power output less than or equal to ten MW.

(b) Emission Credits. A CHP system that meets these requirements may receive a compliance credit against its actual emissions based on the emissions that would have been created by a conventional separate system used to generate the same thermal output. The credit will be subtracted from the actual CHP system emissions for the purpose of calculating compliance with the emission limitations contained in 310 CMR 7.26(43)(b). The credit will be calculated according to the following assumptions and procedures:

1. The emission rates for the displaced thermal system (*e.g.* boiler) will be:
   a. For CHP installed in new facilities, the emissions limits applicable to new natural gas-fired boilers in 310 CMR 7.26(33) in lb/MMBtu.
   b. For CHP systems that replace existing thermal systems for which historic emission rates can be documented, the historic emission rates in lbs/MMBtu, but not more than:

Emissions	**Maximum Rate**
Nitrogen oxides	0.3 lbs/MMBtu
Carbon monoxide	0.08 lbs/MMBtu
Carbon dioxide	117 lbs/MMbtu

2. The emission rate of the thermal system in lbs/MMBtu will be converted to an output-based rate by dividing by the thermal system efficiency. For new systems, the efficiency of the avoided thermal system will be assumed to be 80% for boilers or the design efficiency of other process heat systems. If the design efficiency of the other process heat system cannot be documented, an efficiency of 80%will be assumed. For retrofit systems, the historic efficiency of the displaced thermal system can be used if that efficiency can be documented and if the displaced thermal system is enforceably shut down and replaced by the CHP system, or if its operation is measureably and enforceably reduced by the operation of the CHP system.
3. The emissions per MMBtu of thermal energy output will be converted to emissions per MWh of thermal energy by multiplying by 3.412 MMBtu/MWhthermal.
4. The emissions credits in lbs/MWhthermal, as calculated in 310 CMR 7.26(45)(b)3., will be converted to emissions in lbs/MWhemissions by dividing by the CHP system power-to heat ratio.
5. The credit, as calculated in 310 CMR 7.26(45)(b)4., will be subtracted from the actual emission rate of the CHP system to produce the emission rate for compliance purposes.
6. The mathematical calculations set forth in 310 CMR 7.26(45)(b)1. through 4. are expressed in the following formula:

$$\text{Credit lbs/MWh emissions} = \frac{\text{(boiler limit lbs/MMBtu)}}{\text{(boiler efficiency)}} \times \frac{\text{3.412 MMBtu/Wthermal}}{\text{(power-to-heat ratio)}}$$

7~~. Emissions determined by this methodology for comparison with the emission limitations set forth in 310 CMR 7.26(43)(b) shall satisfy the requirements of 310 CMR 7.02(8)(a)2.~~

~~8.~~ The amount of credit allowed for oxides of nitrogen shall be limited such that total emissions from the CHP system shall be no greater than the sum of emissions from two separate systems producing the amount of electrical and thermal output.

~~(c) Duct Burners. Emissions from duct burners installed in a CHP system shall comply with the emission limitations contained in 310 CMR 7.26(33).~~